

MEMBRANE FOR MICRO-ELECTRO-MECHANICAL
SWITCH, AND METHODS OF MAKING AND USING IT

ABSTRACT OF THE DISCLOSURE

5 A micro-electro-mechanical switch (10, 110, 210) is
known as a MEMS, and includes a base section (13, 14, 17-
18) having two spaced conductive posts (17, 18). A
conductive part (22) is provided between the posts, and
is covered by a dielectric layer (23). A membrane (31,
131, 231) extends between the posts and has spaced
expansion sections (41-42, 141-142, 241-242) which
10 facilitate lengthwise expansion of the membrane as it
flexes between positions in which a central portion
thereof is respectively spaced from and engaging the
dielectric layer. A method of making the switch includes
providing a spacer material (76, 176, 177, 178) with a
top surface having grooves or ridges that correspond to
15 the expansion sections, depositing the membrane over the
top surface of the spacer, and then removing the spacer
material.